

East 7/15/04

L Number	Hits	Search Text	DB	Time stamp
-	24	("2826273" "2965074" "3053526" "3186702" "3618928" "3628638" "3658335" "37228404" "3782695" "3763971" "	US-PGPUB	2004/07/15 12:05:30 PM

-	149	("4478431" "5533871" "4407396" "4506869" "5178240" "5588510" "5600111" "5988606" "6079526" "3677561" "4132395" "4388972" "4474271" "4479638" "4480730" "4485899" "4503815" "4560041" "4610332" "4614255" "4782925" "4790522" "4809828" "4834088" "4846317" "4854429" "4867476" "4896752" "4923038" "4934347" "4949989" "4955460" "4961483" "4972928" "4984819" "4985009" "4995635" "5000478" "5016908" "5020825" "5025899" "5178242" "5207145" "5211268" "5217095" "5220983" "5261448" "5261450" "5284083" "5285875").pn. ("5293971" "5328004" "5337863" "5363945" "5398787" "5462141" "5494626" "5497862" "5509512" "5518089" "5518090" "5529152" "5570762" "5593007" "5605121" "5628496" "5657840" "5669418" "5690198" "5699885" "5706919" "5720369"	USPAT; US-PGPUB	2004/07/15 07:12
Search History 7/15/04 12:08:39 PM Page 2 C:\APPS\least\workspaces\16743359.wsp				

-	0	e05fr003/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:02
-	412	e05f003/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:03
-	128	e05f005/10.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:03
-	37	e05f005/10.ipc. and (air or pneumatic)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:15
-	1	("5157806").PN.	USPAT; US-PGPUB	2004/07/15 07:07
-	14	5157806.URPN.	USPAT	2004/07/15 07:07
-	4	("3266080" "4230309" "4854554" "4920609").PN.	USPAT	2004/07/15 07:08

-	123	("4478431" "5533871" "4407396" "4506869" "5178240" "5588510" "5600111" "5988606" "6079526" "3677561" "4132395" "4388972" "4474271" "4479638" "4480730" "4485899" "4503815" "4560041" "4610332" "4614255" "4782925" "4790522" "4809828" "4834088" "4846317" "4854429" "4867476" "4896752" "4923038" "4934347" "4949989" "4955460" "4961483" "4972928" "4984819" "4985009" "4995635" "5000478" "5016908" "5020825" "5025899" "5178242" "5207145" "5211268" "5217095" "5220983" "5261448" "5261450" "5284083" "5285875").pn. ("5293971" "5328004" "5337863" "5363945" "5398787" "5462141" "5494626" "5497862" "5509512" "5518089" "5518090" "5529152" "5570762" "5593007" "5605121" "5628496" "5657840" "5669418" "5690195" "5699885" "5706919" "5720369"	USPAT; US-PGPUB	2004/07/15 07:15
Search History 7/15/04 12:08:39 PM Page 4 C:\APPS\least\workspaces\10743359.wsp				

-	450	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber) with (serially or series)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:17
-	1	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber) with (serially or series) and 312/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:18
-	1	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) with (serially or series) and 312/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:19
-	104	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) and 312/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:20
-	1215	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:25
-	0	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston) same progressive adj damp\$6	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:22
-	75	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston) same piston with (throughbore or bore or borehole or canal)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:24
-	13	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same (pistons! or first adj2 piston same second adj2 piston) same piston with (throughbore or bore or borehole or canal)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:24
-	419	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston) same spring	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:25
-	230	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston) same spring near5 piston	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:26
-	230	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder or brake) same (pistons! or first adj2 piston same second adj2 piston) same spring near5 piston	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:26
-	33	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same (pistons! or first adj2 piston same second adj2 piston) same spring near5 piston	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:37
-	7	5220706.URPN.	USPAT	2004/07/15 07:30
-	2879	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:14
-	591	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) with piston with (rod or shaft)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:42
-	1003	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston with (rod or shaft)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 11:16
-	27	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston with (rod or shaft) and (two or pair or series or serially or dual) adj3 pistons!	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:50

-	27	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston with (rod or shaft) and (two or pair or dual or series or serially or dual) adj3 pistons!	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 07:51
-	7	(air or pneumatic) and 188/283.ccls.	USPAT; US-PGPUB	2004/07/15 07:53
-	12	(air or pneumatic) and 188/283.ccls.	USOCR	2004/07/15 07:54
-	59	(188/301).CCLS.	USPAT; US-PGPUB	2004/07/15 08:39
-	8	4776440.URPN.	USPAT	2004/07/15 08:23
-	6	("0334105" "1254106" "1744514" "3218849" "3307842" "3531065").PN.	USPAT	2004/07/15 08:35
-	2879	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:49
-	9	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 267/225-226.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:41
-	258	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 267/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:42
-	235	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 188/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:42
-	235	((air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 188/\$.ccls.) not 5.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:47
-	1064	188/316-317.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:47
-	20	188/316-317.ccls. and ((air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:47
-	5	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 188/279,286-287.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:48
-	17	16/66,84.ccls. and pistons!	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 08:49
-	5	4693454.URPN.	USPAT	2004/07/15 08:51
-	18	("Re16582" "0935525" "1310199" "1834671" "2015757" "2416316" "2574314" "2940111" "3042957" "3147967" "3201110" "3358318" "3550733" "3584331" "3768793" "3991863" "4044865" "4307875").PN.	USPAT	2004/07/15 08:52
-	18	3147967.URPN.	USPAT	2004/07/15 08:53
-	5	4693454.URPN.	USPAT	2004/07/15 08:54
-	7	5558190.URPN.	USPAT	2004/07/15 08:54
-	14	("1313763" "2354340" "3107753" "3174343" "3207270" "3260515" "3944221" "4133415" "4164274" "4693454" "4700611" "4880230" "5069317" "5220206").PN.	USPAT	2004/07/15 08:55
-	21	4500075.URPN.	USPAT	2004/07/15 08:56
-	8	("2276338" "2298542" "2586442" "2618365" "3010433" "3220046" "3369323" "3872541").PN.	USPAT	2004/07/15 09:00
-	10	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and 312/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:23

-	613	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and f16f\$.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:26
-	0	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and f16f9/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:24
-	118	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and f16f009/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 11:00
-	3927	A47B088/16.ipc. or A47B097/00.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:26
-	1	((air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and f16f\$.ipc.) and (A47B088/16.ipc. or A47B097/00.ipc.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:26
-	9	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston same furniture	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:27
-	5	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same pistons! and f16f009/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:51
-	118	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston and f16f009/02.ipc.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 09:51
-	0	2625757.URPN.	USPAT	2004/07/15 10:54
-	15	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston with (rod or shaft) and 16/66,84.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 11:17
-	5	(air or pneumatic) with (damper or dampener or dashpot or vibration or shock adj aborber or retarder) same piston with (rod or shaft) and 16/66,84.ccls.	USOCR	2004/07/15 11:18
-	480	16/66,84.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 11:18
-	26	16/66,84.ccls. not 16/66,84.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/15 11:18
-	454	16/66,84.ccls.	USPAT; US-PGPUB	2004/07/15 11:19

7LUS 7/15/04

Butler, Douglas

From: PLUS
Sent: Tuesday, April 27, 2004 8:51 AM
To: Butler, Douglas
Subject: PLUS Results for 10743359

Here are the PLUS search results for 10743359.

This search was prepared by the staff of the Scientific and Technical Information Center, SIRA. If you have questions or comments about this search, please reply via email to PLUS@uspto.gov.



10743359_QUAL.txt



10743359_LIST.txt



10743359_WEST.txt



10743359_EAST.txt



10743359.east



10743359_CLS.txt



10743359_CLSTITLES.t

xt



10743359_WDS.txt

10743359_LIST

PLUS Search Results for S/N 10743359, Searched April 27, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

4478431	5293971	5007659
5533871	5328004	4527676
4407396	5337863	4620619
4506869	5363945	4844682
5178240	5398787	5927239
5588510	5462141	4536629
5600111	5494626	4537374
5988606	5497862	4589675
6079526	5509512	4598929
3677561	5518089	4763754
4132395	5518090	4815576
4388972	5529152	4836754
4474271	5570762	4883409
4479638	5593007	4886424
4480730	5605121	4996907
4485899	5628496	5234203
4503815	5657840	5244064
4560041	5669418	5293968
4610332	5690195	5295564
4614255	5699885	5556265
4782925	5706919	5622149
4790522	5720369	5833036
4809828	5727663	5924528
4834088	5735372	6116871
4846317	5738191	3874307
4854429	5775677	3844543
4867476	5788030	3831529
4896752	5813500	3799528
4923038	5823305	4031989
4934347	5855258	4105193
4949989	5857665	4249456
4955460	5878850	4256438
4961483	5913391	4257581
4972928	5961307	4271924
4984819	5979618	4296288
4985009	5996746	4308475
4995635	6003432	4344637
5000478	6056279	4345748
5016908	6085877	4346794
5020825	6095541	4352645
5025899	6102170	4356898
5178242	6105988	4367882
5207145	6112868	4385665
5211268	6220406	4423800
5217095	6220406	4427351
5220983	6230858	4452436
5261448	6244398	4460073
5261450	6382370	4465049
5284083	6386846	4515252
5285875	6519517	4518058

10743359_EAST

(4478431
5533871
4407396
4506869
5178240
5588510
5600111
5988606
6079526
3677561
4132395
4388972
4474271
4479638
4480730
4485899
4503815
4560041
4610332
4614255
4782925
4790522
4809828
4834088
4846317
4854429
4867476
4896752
4923038
4934347
4949989
4955460
4961483
4972928
4984819
4985009
4995635
5000478
5016908
5020825
5025899
5178242
5207145
5211268
5217095
5220983
5261448
5261450
5284083
5285875) .pn.
(5293971
5328004
5337863
5363945
5398787
5462141
5494626
5497862
5509512

10743359 _EAST

5518089
5518090
5529152
5570762
5593007
5605121
5628496
5657840
5669418
5690195
5699885
5706919
5720369
5727663
5735372
5738191
5775677
5788030
5813500
5823305
5855258
5857665
5878850
5913391
5961307
5979618
5996746
6003432
6056279
6085877
6095541
6102170
6105988
6112868
6220406
6220406
6230858
6244398
6382370
6386846
6519517) .pn.
(5007659
4527676
4620619
4844682
5927239
4536629
4537374
4589675
4598929
4763754
4815576
4836754
4883409
4886424
4996907
5234203
5244064
5293968

10743359_EAST

5295564
5556265
5622149
5833036
5924528
6116871
3874307
3844543
3831529
3799528
4031989
4105193
4249456
4256438
4257581
4271924
4296288
4308475
4344637
4345748
4346794
4352645
4356898
4367882
4385665
4423800
4427351
4452436
4460073
4465049
4515252
4518058) .pn.

10743359_CLS
Most Frequently Occurring Classifications of Patents Returned
From A Search of 10743359 on April 27, 2004

Original Classifications

6	188/266.6
5	188/275
5	188/280
4	188/282.5
4	188/315
4	188/322.15
3	188/266.2
3	188/266.5
3	188/269
3	188/281
3	188/318
3	267/64.17
3	280/276
3	280/5.515
3	417/269
2	91/433
2	105/198.3
2	123/90.17
2	173/162.1
2	188/266.1
2	188/266.4
2	188/266.7
2	188/277
2	188/282.1
2	188/282.3
2	188/282.6
2	188/282.8
2	188/317
2	188/322.13
2	188/322.14
2	188/322.19
2	267/64.11
2	267/64.15
2	280/6.159
2	417/540

Cross-Reference Classifications

21	188/315
18	188/322.15
10	188/317
9	188/322.13
8	188/314
8	188/322.14
7	188/322.17
6	267/64.26
5	188/269
5	188/280
5	188/318
5	188/322.22
5	267/226
5	267/64.25
4	188/266.2
4	188/266.4
4	188/282.5

10743359_CLS

4 267/64.15
3 188/266.5
3 188/282.4
3 188/282.6
3 188/313
3 188/319.1
3 188/322.19
3 267/225
3 267/64.11
3 267/64.16
3 267/64.23
3 280/5.507
3 701/37
2 123/90.31
2 181/403
2 188/266.6
2 188/266.7
2 188/266.8
2 188/267.1
2 188/281
2 188/282.8
2 188/282.9
2 188/284
2 188/285
2 188/298
2 188/316
2 188/319.2
2 188/320
2 267/122
2 267/124
2 267/127
2 267/221
2 267/4
2 267/64.27
2 267/64.28
2 280/124.157
2 280/124.159
2 280/124.16
2 280/5.519
2 417/540

Combined Classifications

25 188/315
22 188/322.15
12 188/317
11 188/322.13
10 188/280
10 188/322.14
8 188/266.6
8 188/269
8 188/282.5
8 188/314
8 188/318
7 188/266.2
7 188/322.17
6 188/266.4
6 188/266.5
6 267/226
6 267/64.15

10743359_CLS

6 267/64.26
5 188/275
5 188/281
5 188/282.6
5 188/322.19
5 188/322.22
5 267/64.11
5 267/64.25
4 188/266.7
4 188/282.8
4 188/319.1
4 267/225
4 267/64.23
4 280/276
4 280/5.507
4 280/5.515
4 417/540
4 701/37
3 188/266.1
3 188/282.4
3 188/284
3 188/285
3 188/298
3 188/313
3 188/316
3 267/64.16
3 267/64.17
3 280/124.157
3 280/5.519
3 417/269
2 91/433
2 92/85B
2 105/198.3
2 123/90.17
2 123/90.31
2 173/162.1
2 180/300
2 181/403
2 188/266.8
2 188/267.1
2 188/277
2 188/282.1
2 188/282.3
2 188/282.9
2 188/299.1
2 188/319.2
2 188/320
2 267/122
2 267/124
2 267/127
2 267/221
2 267/4
2 267/64.21
2 267/64.27
2 267/64.28
2 280/124.159
2 280/124.16
2 280/5.513
2 280/6.159

10743359_CLS

2 310/30
2 417/312
2 417/417

10743359_CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned
From A Search of 10743359 on April 27, 2004

25 188/315 (4 OR, 21 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/297 .Having a thrust member with a variable volume
 chamber (e.g., coaxial or telescoping tubes, compensat
 ing
 reservoir)
 188/313 ..With valve controlling fluid flow between
 chambers or compartments of the chamber
 188/314 ...With reservoir for fluid
 188/315Annular reservoir

22 188/322.15 (4 OR, 18 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/322.13 .Valve structure or location
 188/322.15 ..Piston valve detail (e.g., seat design,
 structural arrangement, metering element)

12 188/317 (2 OR, 10 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/297 .Having a thrust member with a variable volume
 chamber (e.g., coaxial or telescoping tubes, compensati
 ng
 reservoir)
 188/316 ..Fluid through or around piston within chamber
 188/317 ...Via fixed or variable orifice in piston

11 188/322.13 (2 OR, 9 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/322.13 .Valve structure or location

10 188/280 (5 OR, 5 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/280 .Relative speed of thrust member or fluid flow

10 188/322.14 (2 OR, 8 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/322.13 .Valve structure or location
 188/322.14 ..Foot valve

8 188/266.6 (6 OR, 2 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/266.1 .Motion damped from condition (e.g., bump,
 speed change) detected outside of retarder
 188/266.2 ..Condition actuates valve or regulator
 188/266.5 ...Of the pulsating or reciprocating type
 188/266.6Side mounted

10743359_CLSTITLES

8 188/269 (3 OR, 5 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/269 .Using diverse fluids

8 188/282.5 (4 OR, 4 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/281 .Resistance alters relative to direction of
 thrust member (e.g., high resistance in one direction,
 low in the other)
 188/282.1 ..Via valved orifice in thrust member
 188/282.5 ...Flexible flap-type valve (e.g., compression
 washers)

8 188/314 (0 OR, 8 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/297 .Having a thrust member with a variable volume
 chamber (e.g., coaxial or telescoping tubes, compensati
 ng reservoir)
 188/313 ..With valve controlling fluid flow between
 chambers or compartments of the chamber
 188/314 ...With reservoir for fluid

8 188/318 (3 OR, 5 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/297 .Having a thrust member with a variable volume
 chamber (e.g., coaxial or telescoping tubes, compensat
 ing reservoir)
 188/316 ..Fluid through or around piston within chamber
 188/317 ...Via fixed or variable orifice in piston
 188/318And passage venting fluid external to
 chamber

7 188/266.2 (3 OR, 4 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/266.1 .Motion damped from condition (e.g., bump,
 speed change) detected outside of retarder
 188/266.2 ..Condition actuates valve or regulator

7 188/322.17 (0 OR, 7 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/322.16 .Including seal or guide
 188/322.17 ..Between piston rod and cylinder

6 188/266.4 (2 OR, 4 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/266.1 .Motion damped from condition (e.g., bump,
 speed change) detected outside of retarder

188/266.2 ...Condition actuates valve or regulator
188/266.3 ...Of the rotary type
188/266.4 ...Having plural openings

- Page 3

10743359_CLSTITLES
slot, etc.

5 188/322.19 (2 OR, 3 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/322.19 .Cylinder structure

5 188/322.22 (0 OR, 5 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/322.22 .Thrust member or piston structure

5 267/64.11 (2 OR, 3 XR)
Class 267 : SPRING DEVICES
267/2 VEHICLE
267/64.11 .Comprising compressible fluid

5 267/64.25 (0 OR, 5 XR)
Class 267 : SPRING DEVICES
267/2 VEHICLE
267/64.11 .Comprising compressible fluid
267/64.15 ..With retarder
267/64.25 ...Having plural compressible fluid springs

4 188/266.7 (2 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/266.7 .Piezoelectric

4 188/282.8 (2 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/281 .Resistance alters relative to direction of
thrust member (e.g., high resistance in one direction,
low in the other)
188/282.1 ..Via valved orifice in thrust member
188/282.8 ...Spring-loaded valve

4 188/319.1 (1 OR, 3 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume
chamber (e.g., coaxial or telescoping tubes, compensat
ing reservoir)
188/316 ..Fluid through or around piston within chamber
188/317 ...Via fixed or variable orifice in piston
188/319.1Having an orifice adjustment for both
jounce or bound (compression) and rebound

4 267/225 (1 OR, 3 XR)
Class 267 : SPRING DEVICES
267/2 VEHICLE
267/195 .Mechanical spring and nonresilient retarder
(e.g., shock absorber)
267/217 ..Fluid retarder
267/221 ...Helical coil spring

10743359_CLSTITLES

- 267/225Plural mechanical springs for biasing
vehicle parts
- 4 267/64.23 (1 OR, 3 XR)
Class 267 : SPRING DEVICES
267/2 VEHICLE
267/64.11 .Comprising compressible fluid
267/64.15 ..With retarder
267/64.23 ...Having flexible wall
- 4 280/276 (3 OR, 1 XR)
Class 280 : LAND VEHICLES
280/29 WHEELED
280/200 .Occupant propelled type
280/263 ..With steering
280/270 ...One-wheel controlled
280/274Frames and running gear
280/275Yielding
280/276Front forks and heads
- 4 280/5.507 (1 OR, 3 XR)
Class 280 : LAND VEHICLES
280/5.5 SUSPENSION MODIFICATION ENACTED DURING TRAVEL
(I.E., ACTIVE SUSPENSION CONTROL)
280/5.507 .Lateral and longitudinal vehicle attitude
control (e.g., combinations of antidive, antipitch,
antiroll, antisquat, antiway, antiyaw, riding, or
suspension height)
- 4 280/5.515 (3 OR, 1 XR)
Class 280 : LAND VEHICLES
280/5.5 SUSPENSION MODIFICATION ENACTED DURING TRAVEL
(I.E., ACTIVE SUSPENSION CONTROL)
280/5.515 .Suspension stiffness for ride comfort (e.g.,
damping coefficient, spring rate)
- 4 417/540 (2 OR, 2 XR)
Class 417 : PUMPS
417/437 EXPANSIBLE CHAMBER TYPE
417/540 .Having pulsation dampening fluid receiving
space
- 4 701/37 (1 OR, 3 XR)
Class 701 : DATA PROCESSING: VEHICLES, NAVIGATION, AND
RELATIVE LOCATION
701/1 VEHICLE CONTROL, GUIDANCE, OPERATION, OR
INDICATION
701/36 .Vehicle subsystem or accessory control
701/37 ..Suspension control
- 3 188/266.1 (2 OR, 1 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/266.1 .Motion damped from condition (e.g., bump,
speed change) detected outside of retarder
- 3 188/282.4 (0 OR, 3 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER

10743359_CLSTITLES

low 188/281 .Resistance alters relative to direction of thrust member (e.g., high resistance in one direction, in the other)

188/282.1 ..Via valved orifice in thrust member

188/282.2 ...Valve actuated by electrical system

188/282.4System having distinct selections (e.g., hard, medium, soft)

3 188/284 (1 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/284 .Position of thrust member relative to chamber

3 188/285 (1 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/284 .Position of thrust member relative to chamber

188/285 ..Having a fluid flow passage adjusted manually (e.g., threaded plug, threaded rod, gearing)

3 188/298 (1 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume chamber (e.g., coaxial or telescoping tubes, compensatin reservoir)

g 188/298 ..Forming flexible wall enclosure for fluid

3 188/313 (0 OR, 3 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume chamber (e.g., coaxial or telescoping tubes, compensatin reservoir)

g 188/313 ..With valve controlling fluid flow between chambers or compartments of the chamber

3 188/316 (1 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume chamber (e.g., coaxial or telescoping tubes, compensatin reservoir)

g 188/316 ..Fluid through or around piston within chamber

3 267/64.16 (0 OR, 3 XR)
Class 267 : SPRING DEVICES
267/2 VEHICLE
267/64.11 .Comprising compressible fluid
267/64.15 ..With retarder
267/64.16 ...Leveling device

10743359_CLSTITLES

- 3 267/64.17 (3 OR, 0 XR)
 Class 267 : SPRING DEVICES
 267/2 VEHICLE
 267/64.11 .Comprising compressible fluid
 267/64.15 ..With retarder
 267/64.16 ...Leveling device
 267/64.17Self-pumping
- 3 280/124.157 (1 OR, 2 XR)
 Class 280 : LAND VEHICLES
 280/29 WHEELED
 280/80.1 .Running gear
 280/124.1 ..Suspension arrangement
 280/124.157 ...Fluidic suspension
- 3 280/5.519 (1 OR, 2 XR)
 Class 280 : LAND VEHICLES
 280/5.5 SUSPENSION MODIFICATION ENACTED DURING TRAVEL
 (I.E., ACTIVE SUSPENSION CONTROL)
 280/5.515 .Suspension stiffness for ride comfort (e.g.,
 damping coefficient, spring rate)
 280/5.519 ..Plural distinct modes (i.e., HARD-SOFT)
- 3 417/269 (3 OR, 0 XR)
 Class 417 : PUMPS
 417/269 THREE OR MORE CYLINDERS ARRANGED IN PARALLEL,
 RADIAL, OR CONICAL RELATIONSHIP WITH ROTARY TRANSMISSION
 AXIS
- 2 91/433 (2 OR, 0 XR)
 Class 091 : MOTORS: EXPANSIBLE CHAMBER TYPE
 91/418 WITH MOTIVE FLUID VALVE
 91/433 .Both inlet and exhaust controlled by motive
 fluid pressure in supply line or chamber
- 2 92/85B (1 OR, 1 XR)
 Class 092 : EXPANSIBLE CHAMBER DEVICES
 92/85R WITH CUSHIONING MEANS EFFECTIVE OVER A PORTION
 ONLY OF STROKE
 92/85B .Fluid spring
- 2 105/198.3 (2 OR, 0 XR)
 Class 105 : RAILWAY ROLLING STOCK
 105/157.1 TRUCKS
 105/182.1 .Bogie
 105/197.05 ..Sprung bolster
 105/198.2 ...Bolster movement dampened by snubber
 105/198.3Hydraulic damping
- 2 123/90.17 (2 OR, 0 XR)
 Class 123 : INTERNAL-COMBUSTION ENGINES
 123/90.1 POPPET VALVE OPERATING MECHANISM
 123/90.15 .With means for varying timing
 123/90.17 ..Camshaft or cam characteristics
- 2 123/90.31 (0 OR, 2 XR)
 Class 123 : INTERNAL-COMBUSTION ENGINES
 123/90.1 POPPET VALVE OPERATING MECHANISM
 123/90.31 .Camshaft drive means

10743359_CLSTITLES

- 2 173/162.1 (2 OR, 0 XR)
 Class 173 : TOOL DRIVING OR IMPACTING
 173/162.1 INCLUDING MEANS TO VIBRATIONALLY ISOLATE A
 DRIVE MEANS FROM ITS HOLDER
- 2 180/300 (1 OR, 1 XR)
 Class 180 : MOTOR VEHICLES
 180/54.1 POWER
 180/291 .Having specific motor-to-body-frame
 relationship
 180/300 ..Including means of nonsupporting nature for
 minimizing operation-induced movement of motor
- 2 181/403 (0 OR, 2 XR)
 Class 181 : ACOUSTICS
 181/403 REFRIGERATOR COMPRESSOR MUFFLER
- 2 188/266.8 (0 OR, 2 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/266.8 .With failure or malfunction detection
- 2 188/267.1 (0 OR, 2 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/267.1 .Electroviscous or electrorheological fluid
- 2 188/277 (2 OR, 0 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/276 .With means compensating for change in
 temperature or viscosity
 188/277 ..Thermostatic valve type
- 2 188/282.1 (2 OR, 0 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/281 .Resistance alters relative to direction of
 thrust member (e.g., high resistance in one direction, 1
 ow in the other)
 188/282.1 ..Via valved orifice in thrust member
- 2 188/282.3 (2 OR, 0 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER
 188/281 .Resistance alters relative to direction of
 thrust member (e.g., high resistance in one direction,
 low in the other)
 188/282.1 ..Via valved orifice in thrust member
 188/282.2 ...Valve actuated by electrical system
 188/282.3System initiated by a pressure change or
 feedback
- 2 188/282.9 (0 OR, 2 XR)
 Class 188 : BRAKES
 188/266 INTERNAL-RESISTANCE MOTION RETARDER

10743359_CLSTITLES

low 188/281 .Resistance alters relative to direction of thrust member (e.g., high resistance in one direction, in the other)

188/282.1 ..Via valved orifice in thrust member

188/282.8 ...Spring-loaded valve

188/282.9Adjusting the tension via (a) compressing or expanding or (b) different strength springs

2 188/299.1 (1 OR, 1 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/299.1 .Controlled by an operator (e.g., vehicle driver) remote from retarder

ing 2 188/319.2 (0 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume chamber (e.g., coaxial or telescoping tubes, compensat reservoir)

188/316 ..Fluid through or around piston within chamber

188/317 ...Via fixed or variable orifice in piston

188/319.2Orifice size varied using a hand or hand tool

ing 2 188/320 (0 OR, 2 XR)
Class 188 : BRAKES
188/266 INTERNAL-RESISTANCE MOTION RETARDER
188/297 .Having a thrust member with a variable volume chamber (e.g., coaxial or telescoping tubes, compensat reservoir)

188/316 ..Fluid through or around piston within chamber

188/317 ...Via fixed or variable orifice in piston

188/320Tortuous path orifice

2 267/122 (0 OR, 2 XR)
Class 267 : SPRING DEVICES
267/113 FLUID
267/118 .Expansible-contractible chamber device
267/122 ..Diaphragm or bellows

2 267/124 (0 OR, 2 XR)
Class 267 : SPRING DEVICES
267/113 FLUID
267/118 .Expansible-contractible chamber device
267/124 ..Piston

2 267/127 (0 OR, 2 XR)
Class 267 : SPRING DEVICES
267/113 FLUID
267/118 .Expansible-contractible chamber device
267/124 ..Piston
267/126 ...System
267/127Trans-piston passage

10743359_CLSTITLES

- 2 267/221 (0 OR, 2 XR)
 - Class 267 : SPRING DEVICES
 - 267/2 VEHICLE
 - 267/195 .Mechanical spring and nonresilient retarder
(e.g., shock absorber)
 - 267/217 ..Fluid retarder
 - 267/221 ...Helical coil spring
- 2 267/4 (0 OR, 2 XR)
 - Class 267 : SPRING DEVICES
 - 267/2 VEHICLE
 - 267/3 .Railway
 - 267/4 ..Coil
- 2 267/64.21 (1 OR, 1 XR)
 - Class 267 : SPRING DEVICES
 - 267/2 VEHICLE
 - 267/64.11 .Comprising compressible fluid
 - 267/64.15 ..With retarder
 - 267/64.16 ...Leveling device
 - 267/64.19Having flexible wall
 - 267/64.21Including rolling lobe between telescoping
members
- 2 267/64.27 (0 OR, 2 XR)
 - Class 267 : SPRING DEVICES
 - 267/2 VEHICLE
 - 267/64.11 .Comprising compressible fluid
 - 267/64.27 ..Having flexible wall
- 2 267/64.28 (0 OR, 2 XR)
 - Class 267 : SPRING DEVICES
 - 267/2 VEHICLE
 - 267/64.11 .Comprising compressible fluid
 - 267/64.28 ..Including means for charging or discharging
spring
- 2 280/124.159 (0 OR, 2 XR)
 - Class 280 : LAND VEHICLES
 - 280/29 WHEELED
 - 280/80.1 .Running gear
 - 280/124.1 ..Suspension arrangement
 - 280/124.157 ...Fluidic suspension
 - 280/124.158Hydraulic and pneumatic
 - 280/124.159Fluid handling details
- 2 280/124.16 (0 OR, 2 XR)
 - Class 280 : LAND VEHICLES
 - 280/29 WHEELED
 - 280/80.1 .Running gear
 - 280/124.1 ..Suspension arrangement
 - 280/124.157 ...Fluidic suspension
 - 280/124.16Fluid handling details
- 2 280/5.513 (1 OR, 1 XR)
 - Class 280 : LAND VEHICLES
 - 280/5.5 SUSPENSION MODIFICATION ENACTED DURING TRAVEL
(I.E., ACTIVE SUSPENSION CONTROL)

10743359 CLSTITLES

- 280/5.513 .Longitudinal vehicle disposition (e.g.,
antidive, antipitch, antisquat)

- 2 280/6.159 (2 OR, 0 XR)
 Class 280 : LAND VEHICLES
 280/6.15 BODY ELEVATION OR TILT
 280/6.157 .Establishing riding or trim height
 280/6.159 ...Load responsive

- 2 310/30 (1 OR, 1 XR)
 Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
 310/10 DYNAMOELECTRIC
 310/15 .Reciprocating
 310/28 ..Direct-connected
 310/30 ...Solenoid and core

- 2 417/312 (1 OR, 1 XR)
 Class 417 : PUMPS
 417/312 WITH MUFFLER ACTING ON PUMP FLUID

- 2 417/417 (1 OR, 1 XR)
 Class 417 : PUMPS
 417/321 MOTOR DRIVEN
 417/410.1 .Electric or magnetic motor
 417/415 ..Reciprocating rigid pumping member
 417/416 ...Reciprocating motor
 417/417Unitary pump and motor working member

10743359_CLS

Most Frequently Occurring Classifications of Patents Returned
From A Search of 10743359 on April 27, 2004

Original Classifications

6 188/266.6
5 188/275
5 188/280
4 188/282.5
4 188/315
4 188/322.15
3 188/266.2
3 188/266.5
3 188/269
3 188/281
3 188/318
3 267/64.17
3 280/276
3 280/5.515
3 417/269
2 91/433
2 105/198.3
2 123/90.17
2 173/162.1
2 188/266.1
2 188/266.4
2 188/266.7
2 188/277
2 188/282.1
2 188/282.3
2 188/282.6
2 188/282.8
2 188/317
2 188/322.13
2 188/322.14
2 188/322.19
2 267/64.11
2 267/64.15
2 280/6.159
2 417/540

Cross-Reference Classifications

21 188/315
18 188/322.15
10 188/317
9 188/322.13
8 188/314
8 188/322.14
7 188/322.17
6 267/64.26
5 188/269
5 188/280
5 188/318
5 188/322.22
5 267/226
5 267/64.25
4 188/266.2
4 188/266.4
4 188/282.5

10743359_CLS

4 267/64.15
3 188/266.5
3 188/282.4
3 188/282.6
3 188/313
3 188/319.1
3 188/322.19
3 267/225
3 267/64.11
3 267/64.16
3 267/64.23
3 280/5.507
3 701/37
2 123/90.31
2 181/403
2 188/266.6
2 188/266.7
2 188/266.8
2 188/267.1
2 188/281
2 188/282.8
2 188/282.9
2 188/284
2 188/285
2 188/298
2 188/316
2 188/319.2
2 188/320
2 267/122
2 267/124
2 267/127
2 267/221
2 267/4
2 267/64.27
2 267/64.28
2 280/124.157
2 280/124.159
2 280/124.16
2 280/5.519
2 417/540

Combined Classifications

25 188/315
22 188/322.15
12 188/317
11 188/322.13
10 188/280
10 188/322.14
8 188/266.6
8 188/269
8 188/282.5
8 188/314
8 188/318
7 188/266.2
7 188/322.17
6 188/266.4
6 188/266.5
6 267/226
6 267/64.15

10743359_CLS

6 267/64.26
5 188/275
5 188/281
5 188/282.6
5 188/322.19
5 188/322.22
5 267/64.11
5 267/64.25
4 188/266.7
4 188/282.8
4 188/319.1
4 267/225
4 267/64.23
4 280/276
4 280/5.507
4 280/5.515
4 417/540
4 701/37
3 188/266.1
3 188/282.4
3 188/284
3 188/285
3 188/298
3 188/313
3 188/316
3 267/64.16
3 267/64.17
3 280/124.157
3 280/5.519
3 417/269
2 91/433
2 92/85B
2 105/198.3
2 123/90.17
2 123/90.31
2 173/162.1
2 180/300
2 181/403
2 188/266.8
2 188/267.1
2 188/277
2 188/282.1
2 188/282.3
2 188/282.9
2 188/299.1
2 188/319.2
2 188/320
2 267/122
2 267/124
2 267/127
2 267/221
2 267/4
2 267/64.21
2 267/64.27
2 267/64.28
2 280/124.159
2 280/124.16
2 280/5.513
2 280/6.159

F
C

10743359_CLS

2 310/30
2 417/312
2 417/417